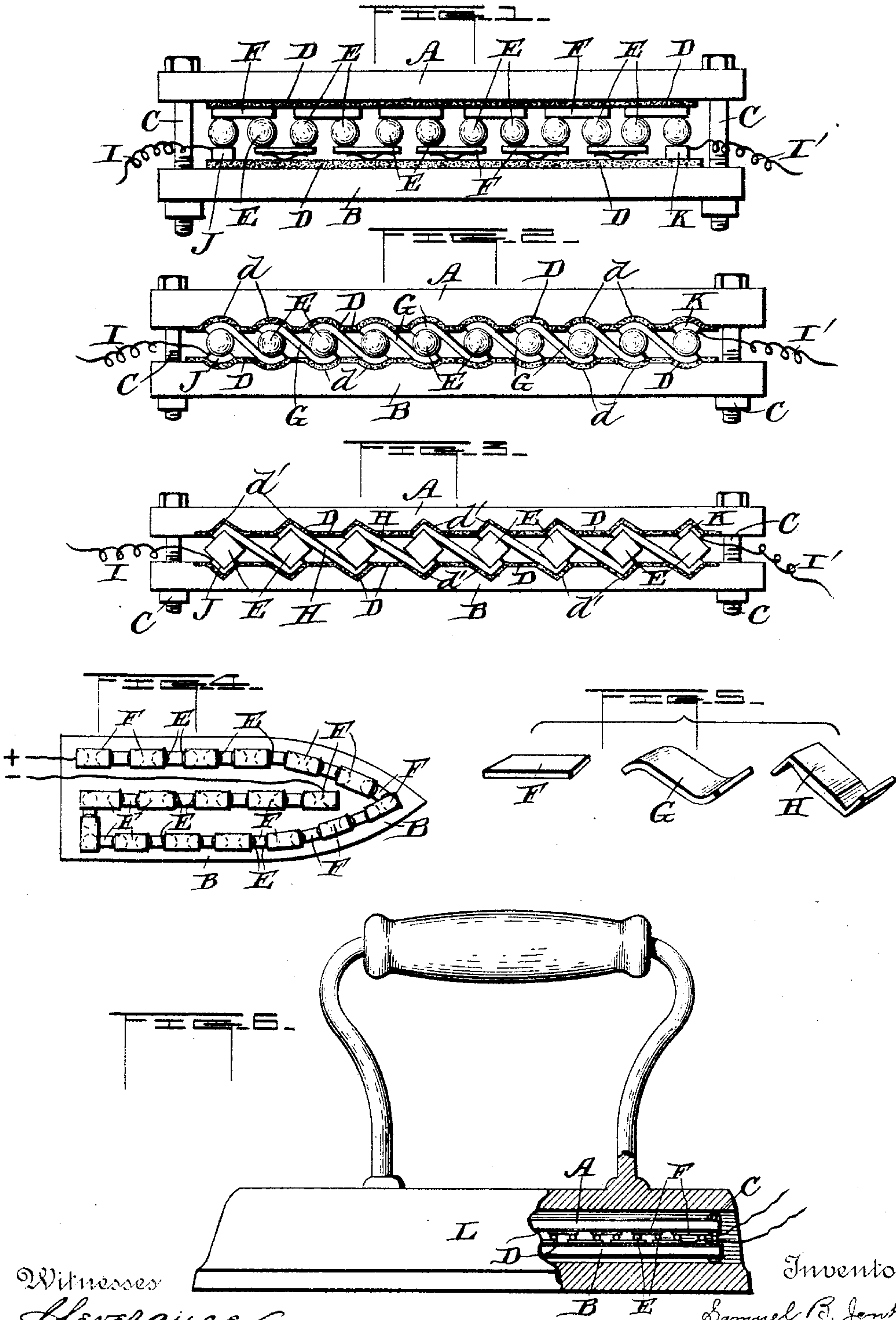


(No Model.)

S. B. JENKINS.
ELECTRIC FLAT IRON HEATER.

No. 497,792.

Patented May 23, 1893.



Witnesses

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Harvey Muzzy

Inventor

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UNITED STATES PATENT OFFICE.

SAMUEL B. JENKINS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
AMERICAN ELECTRIC HEATING COMPANY, OF SAME PLACE.

ELECTRIC FLAT-IRON HEATER.

SPECIFICATION forming part of Letters Patent No. 497,792, dated May 23, 1893.

Application filed December 5, 1892. Serial No. 454,130. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. JENKINS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Electric Flat-Iron Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a satisfactory internal electric heating device for flat-irons and other articles. To this end I make use of two plates with means for clamping them on interposed insulated conductors partly of high resistance through which the current of electricity passes. These conductors are preferably blocks or balls of graphite, alternating with metallic plates which overlap and hold them.

In the accompanying drawings, Figures 1, 2 and 3 represent respectively in side elevation three different forms of the said conductors with their plates and clamping devices. Fig. 4 represents a plan view of the form shown in Fig. 1 with the upper plate removed. Fig. 5 represents a detail view of one of each of the three different kinds of plates or bars which make connection from one ball or block of graphite to another throughout the series; and Fig. 6 represents, in side elevation partly broken away, a flat iron provided with one of the aforesaid heating devices.

A designates the upper, and B the lower, main plate of my heating devices; both being preferably metallic, rectangular and provided with clamping bolts C which pass through them near the corners. Their inner faces are lined with insulating material D and may be flat as in Fig. 1, provided with concavities *d* as in Fig. 2 or provided with angular indentations *d'* as in Fig. 3, the insulating material in each instance conforming to such surfaces. Between these plates thus lined balls or blocks E of graphite are arranged in a continuous series connected electrically by flat metal bars or plates. As shown in Fig. 1, these plates or bars marked F are flat and attached alternately to the said upper and lower main plates. When they are thus arranged the current

passes alternately up and down in traversing the graphite along the chain of resistance. In Fig. 2 the plates G are substituted as connecting devices. These have curved ends which receive the balls or blocks and fit into the recesses *d* of the upper and lower main plates aforesaid. In Fig. 3 the plates H are substituted, differing from plates G chiefly in the substitution of angular for curvilinear ends. In Figs. 1 and 2 the pieces of graphite E are balls; in Fig. 3 they are cubes; but they may have any other convenient form, the plates or bars being adapted thereto. As shown in Fig. 4 the preferable arrangement is that of a chain running lengthwise of the plate B near one edge thereof then back parallel to and near the other edge thereof and finally up along the central line of the said plate. But any other arrangement may be adopted presenting the resistance and connecting plates continuously for the passage of the current through them. At each end of the series thus formed an additional metallic plate J or K is attached to one of the said plates A and B and arranged in contact with the terminal ball or block of graphite. A wire I is attached to the plate J at one end of the series and a wire I' to the plate K at the other end thereof these wires being part of an electric circuit; which therefore passes also through the series of carbon balls or blocks and their connecting plates, with the usual result of evolving heat. The bolts C, by drawing the plates A and B together, hold the intervening balls or blocks of carbon and bars or plates of metal in position as shown; by tightening or loosening them the compression of the graphite may be varied, correspondingly varying the resistance and heat.

The devices hereinbefore described constitute a complete electrical heater adapted to general use; but the said heater is most available for heating flat irons, into which it may be inserted from the open rear of a hollow flat iron body L shown in Fig. 6.

Instead of graphite other forms of carbon or equivalent resisting material may be used in the balls or blocks aforesaid.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with two plates and means for clamping them together, interposed balls or blocks of graphite or equivalent material and conducting plates overlapping the said balls or blocks so as to be interposed between them and the two plates aforesaid making an electric circuit through the said balls or blocks for the purpose set forth.
2. In combination with two plates and means for clamping them together, interposed pieces of resisting material bars or plates connecting them in a continuous chain of resistance, and interposed between the said two plates and the said pieces and electrical connections making circuit through the said chain substantially as set forth.
3. In combination with plates A and B and bolts C for clamping them together, the insulating linings D for the said plates, the balls or blocks E of resisting material the flat plates F attached alternately to the said plates A and B, and connecting the said balls or blocks in a continuous series and the necessary electrical connections making circuit through the said series substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL B. JENKINS.

Witnesses:

PELATIAH R. TRIPP,
WALTER A. BROWNE.